REMARKS

Status Of Application

Claims 1, 2, 4-18, and 20-51 were pending in the application; the status of the claims is as follows:

Claims 28-45 are withdrawn from consideration.

Claims 1, 2, 4-8, and 46-48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,444,807 to Liu ("Liu '807") in view of U.S. Patent No. 6,235,471 B1 to Knapp et al ("Knapp").

Claims 1, 2, 4-18, 20, 22-27, and 46-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,020,207 to Liu ("Liu '207") in view of Knapp.

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Knapp, as described above, and further in view of U.S. Patent No. 5,804,453 to Chen ("Chen").

Claims 50 and 51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Knapp, as applied to claim 17 above, and further in view of either one of U.S. Patent No. 6,078,705 to Neuschafer et al ("Neuschafer") or U.S. Patent No. 5,082,629 to Burgess, Jr. et al ("Burgess").

Information Disclosure Statement

The Office Action indicates that the Information Disclosure Statement, along with PTO Form 1449, which was filed on January 9, 2002 (mailed to the Patent and Trademark Office on December 13, 2001) has not been received. Enclosed herewith is a true copy of the Information Disclosure Statement and the PTO Form 1449 from our file . Also enclosed herewith are copies of references (1), (2) and (4). No copy of documents (3) and

(5) are provided as the Patent and Trademark Office has waived the requirement under 37 C.F.R. 1.98. Acknowledgment of receipt of these documents is respectfully requested.

Claim Amendments

Claims 1, 4, 6 and 17 have been amended to more clearly describe the invention. These changes do not introduce any new matter.

35 U.S.C. § 103(a) Rejections

The rejection of claims 1, 2, 4-8, and 46-48 under 35 U.S.C. § 103(a), as being unpatentable over Liu '807 in view of Knapp, is respectfully traversed based on the following.

Claim 1, as amended, includes the following limitations:

> a detection target region ... having an end located proximate said confluence area and a second end located proximate said ventilator port; and
>
> an optical path ... passing from said confluence area to said ventilator port ....

Thus, claim 1 requires that the detection target region extend from the confluence area to the ventilator port. The optical path likewise extends from at least the confluence area to the ventilator port to provide for detection of light from the reaction. Detection can thus be performed immediately after mixing of the materials giving rise to the reaction and can continue to the ventilator port.

The Office Action indicates that Liu '807 discloses a detection target region provided within a portion of a flow pass, and that Knapp discloses branched flow paths, valves and micropumps. However, neither Liu '807 nor Knapp discloses a detection target region having an end located proximate a confluence area and a second end located proximate a ventilator port.

The detection target region of Liu '807 is neither proximate a confluence area nor a ventilator port (discharge port 13). Liu '807 simply discloses a single flow pass and does not disclose a confluence area in which, for example, specimen and reagent flow can be joined so as to be mixed. Further, Fig. 3 of Liu '807 discloses a substantial portion of waveguide capillary 10 between the detection target region (the horizontal portion of 10) and the entry and discharge ports 12, 13. Thus, Liu '807 does not teach or suggest a detection target region having an end located proximate a confluence area and a second end located proximate a ventilator port. As such, Liu '807 fails to disclose every element of claim 1.

While Knapp does disclose branched flow paths, the detection zone of Knapp (e.g., detection zone 426) extends only a short distance and does not have an end located proximate a confluence area and a second end located proximate a ventilator port. Therefore, Knapp fails to disclose every element of claim 1. Applicants respectfully submit that the combination of Liu '807 and Knapp fails to teach, suggest, or render obvious Claim 1 of the present invention. Claim 2 depends from Claim 1 and is allowable for at least the reasons discussed with respect to Claim 1.

Claim 4, as amended, includes the following limitations:

> a detection target region ... having an end located proximate said confluence area and a second end located proximate said ventilator port;

As discussed above, neither Liu '807 nor Knapp discloses a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, the combination of Liu '807 and Knapp fails to teach, suggest, or render obvious Claim 4 of the present invention. Claim 5 depends from Claim 4 and is allowable for at least the reasons discussed with respect to Claim 4.

Claim 6, as amended, includes the following limitations:

> a detection target region ... having an end located proximate said confluence area and a second end located proximate said ventilator port;

As discussed above, neither Liu '807 nor Knapp discloses a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, the combination of Liu '807 and Knapp fails to teach, suggest, or render obvious Claim 6 of the present invention. Claims 7-8 depend from Claim 6 and are allowable for at least the reasons discussed with respect to Claim 6.

Claims 46-48 have been cancelled. Thus, the rejection of claims 46-48 is moot.

Accordingly, it is respectfully requested that the rejection of claims 1, 2, 4-8, and 46-48 under 35 U.S.C. § 103(a) as being unpatentable over Liu '807 in view of Knapp, be reconsidered and withdrawn.

The rejection of claims 1, 2, 4-18, 20, 22-27, and 46-49 under 35 U.S.C. § 103(a), as being unpatentable over Liu '207 in view of Knapp, is respectfully traversed based on the following.

As discussed above, Claim 1 requires that the detection target region extend from the confluence area to the ventilator port. The Office Action indicates that Liu '207 discloses a flow pass 10 which further constitutes a detection target region, and that Knapp discloses branched flow paths, valves and micropumps. However, neither Liu '207 nor Knapp discloses a detection target region having an end located proximate a confluence area and a second end located proximate a ventilator port.

Liu '207 discloses a liquid core waveguide sensor cell. However, there is no disclosure in Liu '207 of a confluence area in which, for example, specimen and reagent flow can be joined so as to be mixed. Rather, Liu '807 simply discloses a single flow pass. Thus, Liu '207 does not teach or suggest a detection target region having an end located

proximate a confluence area and a second end located proximate a ventilator port. As such, Liu '207 fails to disclose every element of claim 1.

While Knapp does disclose branched flow paths, the detection zone of Knapp (e.g., detection zone 426) extends only a short distance and does not have an end located proximate a confluence area and a second end located proximate a ventilator port. Therefore, Knapp fails to disclose every element of claim 1. Applicants respectfully submit that the combination of Liu '207 and Knapp fails to teach, suggest, or render obvious Claim 1 of the present invention. Claim 2 depends from Claim 1 and is allowable for at least the reasons discussed with respect to Claim 1.

As discussed above, Claim 4 requires that the detection target region extend from the confluence area to the ventilator port. Further, as discussed above, neither Liu '207 nor Knapp discloses a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, the combination of Liu '207 and Knapp fails to teach, suggest, or render obvious Claim 4 of the present invention. Claim 5 depends from Claim 4 and is allowable for at least the reasons discussed with respect to Claim 4.

As discussed above, Claim 6 requires that the detection target region extend from the confluence area to the ventilator port. Further, as discussed above, neither Liu '207 nor Knapp discloses a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, the combination of Liu '207 and Knapp fails to teach, suggest, or render obvious Claim 6 of the present invention. Claims 7-16 depend directly or indirectly from Claim 6 and is allowable for at least the reasons discussed with respect to Claim 6.

Claim 17, as amended, includes the following limitations:

> a detection target region ... having an end located proximate said confluence area and a second end located proximate said ventilator port;

Thus, Claim 17 requires that the detection target region have an end located proximate the confluence area and a second end located proximate the ventilator port. As discussed above, neither Liu '207 nor Knapp discloses a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, the combination of Liu '207 and Knapp fails to teach, suggest, or render obvious Claim 17 of the present invention. Claims 18, 20 and 22-27 depend directly or indirectly from Claim 17 and is allowable for at least the reasons discussed with respect to Claim 17.

Claims 46-49 have been cancelled. Thus, the rejection of claims 46-49 is moot.

Accordingly, it is respectfully requested that the rejection of claims 1, 2, 4-18, 20, 22-27, and 46-49 under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Knapp, be reconsidered and withdrawn.

The rejection of claim 21 under 35 U.S.C. § 103(a), as being unpatentable over Liu '207 in view of Knapp, as described above, and further in view of Chen, is respectfully traversed based on the following.

Claim 21 depends from claim 17. As Liu '207 and Knapp fail to render obvious claim 17, Liu '207 and Knapp also fail to render obvious claim 21. Moreover, Chen fails to cure the deficiencies of Liu '207 and Knapp. Chen does not teach, suggest, or disclose a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, a combination of Liu '207, Knapp and Chen fails to disclose every element of the claimed invention.

Accordingly, it is respectfully requested that the rejection of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Knapp, as described above, and further in view of Chen, be reconsidered and withdrawn.

The rejection of claims 50 and 51 under 35 U.S.C. § 103(a), as being unpatentable over Liu '207 in view of Knapp, as applied to claim 17 above, and further in view of either one of Neuschafer and Burgess, is respectfully traversed based on the following.

Claims 50 and 51 depend directly or indirectly from claim 17. As Liu '207 and Knapp fail to render obvious claim 17, Liu '207 and Knapp also fail to render obvious claim 21. Moreover, Neuschafer and Burgess fail to cure the deficiencies of Liu '207 and Knapp. Neuschafer and Burgess fail to teach, suggest, or disclose a detection target region having an end located proximate the confluence area and a second end located proximate the ventilator port. Thus, a combination of Liu '207, Knapp, Neuschafer and Burgess fails to disclose every element of the claimed invention.

Accordingly, it is respectfully requested that the rejection of claims 50 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Knapp, as applied to claim 17 above, and further in view of either one of Neuschafer and Burgess, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be

construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

By: _____
Tung T. Nguyen
Registration No. 42,935
Attorney for Applicants

TTN/llb:bar
SIDLEY AUSTIN BROWN & WOOD LLP
717 N. Harwood, Suite 3400
Dallas, Texas 75201
Direct: (214) 981-3478
Main: (214) 981-3300
Facsimile: (214) 981-3400
October 28, 2005